

REMARKS

Reconsideration and allowance in view of the foregoing amendments and the following remarks are respectfully requested.

Claim 1 has been amended. Claims 1-10 are pending in this application.

Applicant wishes to thank Examiner Diacou for the courtesy extended during the telephone interviews on August 2, 2006 and September 20, 2006. As agreed with the Examiner, Applicant has filed this amendment for further consideration.

Claim Rejections – 35 U.S.C §102

Claims 1, 2 and 5 stand rejected under 35 U.S.C §102(b) as being clearly anticipated by DeMarco et al. Applicant traverses the rejection for the following reasons.

As discussed in the telephone interview, Applicant has amended claim 1 which is now directed to a gain-clamped optical amplifier comprising optical reflection means installed on an input optical fiber, optical anti-reflection means installed on an output optical fiber opposite to the input optical fiber having the optical reflection means installed on, and an optical amplifier located between the optical reflection means and the optical anti-reflection means, for amplifying an input signal, and an optical reflection signal. In the gain-clamped optical amplifier, an amplified spontaneous emission light emitted from the optical amplifier to the input optical fiber is reflected by the optical reflection means installed in the input optical fiber, the spontaneous emission light inputted to the input optical fiber and reflected by the optical reflection means is in a same direction as the input optical signal, and a change in the input signal is compensated by the amplified spontaneous emission light such that a gain is constantly maintained regardless of a power level of the input signal, as recited in claim 1, as amended.

In the telephone interview, the Examiner has asked why an optical reflection means is installed on an input optical fiber and an optical anti-reflection means is installed on an

output optical fiber opposite to the input optical fiber. The Amendment has been made in order to clearly define the invention and address the Examiner's concern. The claimed invention is provided to have an optical reflection means installed on an input optical fiber and an optical anti-reflection means installed on an output optical fiber, and an optical amplifier located between the optical reflection means and the optical anti-reflection means. With the structure, an amplified spontaneous emission light emitted from the optical amplifier to the input optical fiber is reflected by the optical reflection means installed in the input optical fiber and amplified in the optical amplifier, and the spontaneous emission light inputted to the input optical fiber and reflected by the optical reflection means is in a same direction as the input optical signal. Due to the structure of the claimed invention, a change in the input signal is compensated by the amplified spontaneous emission light such that a gain is constantly maintained regardless of a power level of the input signal.

These distinctive features of the claimed invention is neither disclosed not taught by DeMarco et al. In DeMarco et al., only a reflected optical signal is generated in the reflector 15 which corresponds to the input optical fiber of the claimed invention. In contrast, an input optical signal and a reflected optical signal are generated in the input optical fiber.

Further, the input optical signal and the reflected optical signal are amplified in the optical amplifier and the amplified gain is divided/used in the gain-clamped optical amplifier of the claimed invention. Because of this, the input optical signal has to be utilized in the claimed invention. To the contrary, since DeMarco et al. is directed to obtain a specific wave of high output among multi-waves, DeMarco et al. implements only the reflected amplified spontaneous emission light generated in pump 12 and WDM 13 in the reflector 15. In other words, DeMarco et al. does not need the input optical signal.

Moreover, the gain-clamped optical amplifier of the claimed invention requires the optical anti-reflection means on the output fiber so that the signal is transferred through the optical anti-reflection means. In contrast, Applicant submits that the non reflective

termination 16 of the DeMarco et al. has nothing to do with the transferring function of the gain-clamped optical amplifier of the claimed invention.

For all of the reasons discussed above, Applicant submits that claim 1 is not anticipated by DeMarco et al. under 35 U.S.C §102(b). Claims 2 and 5, which are dependent on the claim 1 are patentable for the reasons discussed above with respect to claim 1 as well as on their own merits.

Claim Rejections - 35 U.S.C §103

Claim 8 stands rejected under 35 U.S.C §103(a) as being unpatentable over DeMarco et al., and further in view of Hecht. Applicant traverses the rejection for the following reasons.

As set forth above, DeMarco et al. neither discloses nor suggests all of the features of claim 1. Applicant submits that Hecht does not supply the above-noted deficiencies of DeMarco et al. Accordingly, claim 8, which is dependent on claim 1, is believed allowable for the same reasons discussed above with respect to claim 1, as well as on its own merits.

Election Requirement

The Examiner is respectfully requested to reconsider and withdraw the election requirement. Both 37 CFR §1.141 and M.P.E.P. §806.048 provide that a reasonable number of species may be claimed in one application. It is respectfully submitted that the number of species claimed in the present application does not exceed such a reasonable number. As claim 1 is believed allowable and all of the withdrawn claims 3-4, 6-7 and 9-10 are dependent on claim 1, Applicant respectfully requests reconsideration and allowance of the withdrawn claims.

Conclusion

All objections and rejections having been addressed, it is respectfully submitted that claims 1-10 are now in condition for allowance and a notice to that effect is earnestly solicited. If any issues remain to be resolved, the Examiner is cordially invited to telephone the undersigned attorney at the number listed below.

Respectfully submitted,

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Date: September 22, 2006